

# MANUFACTURING EXTENSION PARTNERSHIP

## Success Stories from the Field

### Kialoa Paddles

#### Oregon Manufacturing Extension Partnership

#### KIALOA Paddles Improves Efficiency with New Lean Operating Strategy

##### Client Profile:

KIALOA Paddles, founded in 1991, manufactures a full line of carbon fiber, carbon fiber/wood hybrid and hand crafted wood paddles for outrigger and dragon boat racing, and for stand up paddling. Located in Bend, Oregon, the company currently employs 8 people.

##### Situation:

KIALOA experienced tremendous sales growth but had not turned the sales into additional profits. During the economic downturn, paddle sales continued to be strong despite the weak economy. KIALOA had a different problem; they were not able to meet the customer's demand for product, often finding themselves out of stock on the paddle sizes ordered, despite having high inventory levels. KIALOA's capacity model was to build paddle inventory during the off season, keeping their employees employed and leveling their seasonal demand. Long lead times and poor delivery performance from their suppliers created problems meeting customer demand. KIALOA became aware of the Small Business Lean Program offered in Oregon Economic Development Region 10 and began working with the Oregon Manufacturing Extension Partnership (OMEP), a NIST MEP network affiliate.

##### Solution:

OMEP's performed a Small Business Assessment of KIALOA and identified three major areas that would improve their performance: 1) Use Lean flow concepts and understand their cyclical demand to develop a new operating strategy reducing excess inventory, meeting customer demand and improving cash flow (Build-to-Order instead of Build-to-Stock); 2) Use Value Stream Mapping (VSM) to identify and eliminate waste within operations by applying Lean pull/flow philosophies where possible; and 3) Manage supply chain relationships using lean concepts to support meeting customer demand. OMEP created a Capacity/Production Planning spreadsheet allowing KIALOA owners to develop a new operating strategy that supported full employment, improved cash flow, and reduced stock out situations. VSM and Lean continuous improvement techniques were used at both KIALOA facilities. Efficiency improved and Lead time reductions were made by changing the assembly operation to a Build-to-Order model reducing the finished goods Inventory and supporting the new operating strategy. This eliminated building the wrong product in the wrong size and produced an immediate improvement in the order fulfillment rate.

OMEP developed a Lean strategy for working with KIALOA's composite supplier sharing information and performance expectations. KIALOA, with OMEP's assistance, developed a purchase replenishment system based on a 'Pull'; replenishing only what was sold the previous week. The capacity plan also identified early on the composite supplier's monthly capacity shortages based on shift staffing and tooling capacities. The supplier was able to ramp up capacity for the seasonal period and build additional tooling to meet demand. OMEP's Capacity/Production Planning tool supported full employment, improved cash flow, and reduced out-of-stock situations for the company.

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**Results:**

- \* Increased sales by \$107,000.
- \* Realized \$10,000 in cost savings.
- \* Invested \$59,000 in workforce development.
- \* Increased production by 20 percent to 30 percent.
- \* Reduced lead time from 2 weeks to 1 day.

**Testimonial:**

"Working with OMEP, we have become true believers in working with Lean as a business operating philosophy and we will continue to embrace it even after our contract with OMEP comes to an end. OMEP was willing to provide the assessments and teaching tools necessary for ongoing improvement in any area that we needed or that our consultants saw that we needed."

Meg Chun, Owner